

# PATENT ABSTRACTS OF JAPAN

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(71)Applicant : FUJI XEROX CO LTD

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(72)Inventor : NASHIMOTO KEIICHI

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## (54) OPTICAL SWITCH

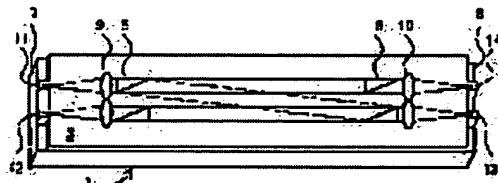
### (57)Abstract:

**PROBLEM TO BE SOLVED:** To provide an optical switch in which the number of optical switch elements can be decreased, insertion loss and crosstalk are less, and switching among ports having appropriate interval can be realized by driving voltage and good balanced size.

**SOLUTION:** An incident end plane 7 is provided with channel optical waveguides 11 and 12, light beams made incident in parallel are diverged by a slab type optical waveguide part 3, after they are made

parallel light beams by a first thin film lens 9, they are converged to an outgoing end plane 8 by a second thin film lens 10, and made incident on each optical fiber through channel optical waveguides 13 and 14.

Light beams are deflected by applying voltage between one of first prism type upper part electrodes 5 and a substrate 1 being a lower part electrode, further, they are deflected in the inverse direction to previous deflection by applying voltage between one of second prism type upper part electrodes 6 and the substrate 1 being a lower part electrode, they are converged by the second thin film lens 10, and an optical path is switched.



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## LEGAL STATUS

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